

DETAILED ACTION

Drawings

1. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because figure 2 appears to be informal and very hard to see. Applicant is advised to employ the services of a competent patent draftsperson outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.
2. The drawings were received on 4/28/06. Figure 1 is approved. Figure 2 is not approved for the reason stated above.
3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the integration of the check valve and the relay valve as claimed in claims 9 and 10 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate

Art Unit: 3657

changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

4. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

5. The abstract of the disclosure is objected to because it employs legalese such as "means". Correction is required. See MPEP § 608.01(b).

6. The amendments to the specification as submitted on 4/28/06 are approved in part. The amendment to paragraph [0002] is not approved. It is believed that braking

Art Unit: 3657

force of the front axle is influenced by the load valve, not the rear axle as amended.

The rest of the amendments as submitted on 4/28/06 is approved.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 8-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- Claim 8 recites indefinite terms such as “in order to” and “can be”. These terms provide the options or the possibility of the functions and the structures; but do not positively recite that the functions or structures to actually be there.
- Claims 9 and 10 recite “the other valve”. It is believed that it should be --said another valve--.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Art Unit: 3657

10. Claims 7-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fischer (DE 19947753) in view of Schappler et al. (5,560,688).

Re: claim 7, Fischer shows a brake system, as in the present invention in figure 4, comprising: a front-axle brake circuit 10, 20 having a load emptying valve 14b and front axle brake cylinder, the load emptying valve influencing a brake pressure at the front axle brake cylinders; and a rear-axle brake circuit 30, 40 having an automatic load-dependent brake pressure regulator 50 and rear axle brake cylinders, a brake pressure at the rear axle brake cylinders being influenced as a function of a load acting on a rear axle; a fluid connection 73, the load emptying valve having a control inlet connected to the rear- axle brake circuit via the fluid connection; a check valve 90 provided in the fluid connection between the load emptying valve and the rear-axle brake circuit; and a controller 60, the check valve being switched to a shutoff position when a brake slip regulating process is carried out at the rear axle by the controller so that the fluid connection from the load emptying valve in a direction of the rear axle brake cylinders is shut off; the check valve including an integrated nonreturn valve, shown as the upper portion of the check valve 90, the nonreturn valve, in the shutoff position of the check valve, being connected to the fluid connection and preventing a drop in pressure at the control inlet of the load emptying valve, and permitting a rise in pressure at the control inlet of the load emptying valve. Fischer does not show the inner details of the check valve 90. Schappler is cited to show the inner details of a typical two way solenoid valve 2. Valve 2 is controlled by the current to either open or close. Figure 1 shows valve 2 comprises a spring, not numbered. Due to the inner structures of a typical two

way solenoid valve comprising a solenoid, valve member, valve seat and a spring, when the pressure is high enough to overcome the strength of the spring, the valve member would be lifted off the valve seat; hence would act as a nonreturn valve as shown by Schappler. It is believed that although not expressly stated or shown, Fischer's valve 90 comprises the inner details of a typical two way solenoid valve as shown by Schappler.

Re: claim 8, Fischer's valve 90 comprises the functions as claimed.

Re: claims 9 and 10, page 3, third paragraph to the last of the translation of the Fischer document shows that valve 90 can be integrated into valve 14.

Re: claims 11 and 12, the title and the abstract of Fischer show that the brake system is for ABS control of a utility vehicle.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Sugimoto et al. is cited for another brake system with typical two way solenoid valves 7F and 7R.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lan Nguyen whose telephone number is (571) 272-7121. The examiner can normally be reached on Monday through Friday, 7:30am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Siconolfi can be reached on (571) 272-7124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Xuan Lan Nguyen/
Primary Examiner
Art Unit 3657